

CLAIMS:

1. A container for containing material to be analysed using magnetic resonance, the container including a receive coil for use in analysing material
5 contained in the container and a connector for detachably connecting the receive coil, directly or via an adaptor, to an input of a magnetic resonance scanner.
2. A container according to Claim 1, wherein the connector provides an
10 inductive coupling to the receive coil.
3. A container according to Claim 1, wherein the connector provides a direct electrical contact to the receive coil.
- 15 4. A container according to Claim 1, wherein the connector includes a transmitter for establishing a wireless link between the receive coil and the input of the magnetic resonance scanner.
- 20 5. A container according to any one of claims 1 to 3 wherein the receive coil is also adapted for use as a transmit coil for use in analysing material contained in the container.
6. A container according to any one of the preceding claims wherein the
25 container is sealable.
7. A container according to any one of the preceding claims wherein the receive coil is constructed as a volume coil such that material to be analysed can be placed inside the coil.

8. A container according to any one of the preceding claims wherein the container is made of non-ferromagnetic material such that material contained in the container can be analysed by use of an excitation pulse generated by use of at least one transmit coil external to the container.

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9. A scanner for use in analysis by magnetic resonance, the scanner having detachably connected thereto a container including a receive coil for use in analysing material contained in the container.

10. A scanner according to Claim 9, said scanner being an open scanner, provided with at least one transmit coil and at least one receive coil arranged for use in imaging a three-dimensional space in which a surgical procedure can be at least partially carried out.

11. A scanner according to Claim 10 wherein the container is disposed in said space to enable analysis of material contained in the container by use of said at least one transmit coil, together with the receive coil of the container.

12. A scanner according to any one of Claims 9, 10 or 11 wherein the receive coil of the container is adapted to function additionally as a transmit coil for use in analysis of material contained in the container.

13. A scanner according to any one of Claims 9 to 12, the scanner being provided with an adaptor between the scanner and the container, for adapting the detachable connection to meet requirements of the scanner and of the receive coil of the container in said use in analysing material contained in the container.

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14. A method of analysing material by use of magnetic resonance, the method comprising :

- i) generating a main magnetic field for use in analysing a body of material positioned in the field;
- 5 ii) removing analysed material from said body of material;
- iii) placing the removed material in a container which includes a receive coil; and
- iv) placing the container in the magnetic field;
- v) applying an excitation pulse to the removed material; and
- 10 vi) using the receive coil of the container in analysing the removed material.

15. A method according to Claim 14 wherein the body is at least initially situated in a first locality; the method further comprising

- 15 vii) sealing the container at the first locality.

16. A method according to Claim 14 wherein the body is at least initially situated in a first locality; the method further comprising

- viii) labelling the container at the first locality.

20 17. A method according to Claim 14 wherein the body is at least initially situated in a first locality; the method further comprising

- ix) transporting the container to a second locality.

25 18. A method according to Claim 14 wherein the body is at least initially situated in a first locality; the method further comprising

- x) further analysing the removed material at a second locality.

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19. A method according to Claim 14 wherein the receive coil of the container is adapted also to act as a transmit coil, for generating the excitation pulse.

5 20. A method according to claim 14 wherein the excitation pulse is generated by a transmit coil external to the container.

21. A method according to claim 14 wherein the body is a patient and the first locality is an operating theatre.

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22. A method of analysing body tissue by use of magnetic resonance, the method comprising :

i) generating a main magnetic field for use in analysing a body tissue of a patient positioned in the field;

15 ii) resecting the analysed body tissue from said patient;

iii) placing the resected body tissue in a container which includes a receive coil; and

iv) placing the container in the magnetic field;

v) applying an excitation pulse to the resected body tissue; and

20 vi) using the receive coil of the container in analysing the resected body tissue.

23. A method according to Claim 22, wherein the patient is situated in an operating theatre.

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24. A method according to Claim 23 further comprising

vii) sealing the container inside the operating theatre.

25. A method according to Claim 23 further comprising
viii) labelling the container inside the operating thraatre.

5 26. A method according to Claim 23 further comprising
ix) further analysing the resected body tissue outside the operating thraatre.

27. A method according to Claim 22 wherein the receive coil of the
container is adapted also to act as a transmit coil, for generating the excitation
pulse.

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28. A method according to claim 22 wherein the excitation pulse is
generated by a transmit coil external to the container.

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29. A method according to claim 22, wherein the body tissue comprises
tumour tissue

30. A method of analysing a sample material at a first locality by use of
magnetic resonance, the method comprising the steps of:

- 20 i) placing the sample material in a sample container having a receive coil;
ii) using a transmit coil external to the container to apply an excitation
pulse to the sample material; and
iii) using the receive coil to analyse the sample material by use of magnetic
resonance in response to the excitation pulse.

25 31. A method as claimed in claim 30 further comprising
iv) sealing the container at the first locality.

32. A method as claimed in any of claims 30 to 31 further comprising
v) labelling the container at the first locality.

33. A method as claimed in any of claims 30 to 32 further comprising
vi) transporting the container to a second locality.

34. A method as claimed in any of claims 30 to 32 further comprising
vii) further analysing the sample material at a second locality.

35. A method as claimed in any of claims 30 to 34 including using
apparatus external to the container to provide a main magnetic field within
which the sample container is positioned during analysis.

36. A method as claimed in any of claims 30 to 35 including using
apparatus external to the container to provide magnetic gradients within which
the sample container is positioned during analysis.

37. A method as claimed in any of claims 30 to 36, wherein the sample
material comprises body tissue.

38. A method as claimed in any of claims 30 to 37, wherein the sample
material comprises tumour tissue.

39. A method as claimed in any of claims 30 to 38, wherein the first locality is
an operating theatre.

40. A method as claimed in claims 33 or 34, wherein the second locality is a
laboratory.